

**TALIB RIA JAAFAR**

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**BIOGRAPHY**

Dr Talib started his carrier as testing officer in 1985 where he conduct testing, evaluating and analyzing the test results for mechanical and automotive components. Then he has been a researcher since 1997. He has been involved in researcher areas of hard thin film coating, brake friction materials and cutting tools. He has been utilizing coating equipment and powder metallurgy equipment such as physical vapour deposition, chemical vapour deposition, plasma spray coating, warm compaction press, cold isostatic press, hot isostatic press, continuous sintering furnace in course of his research. He has been employing characterization equipment such as scanning electron microscopy, x-ray diffraction, x-ray photoelectron spectroscopy, microhardness tester, pin-on disc tribometer, friction materials test stand CHASE.

Talib received a B.Eng. in Mechanical engineering from the Universiti Teknologi MARA in 1977, MSc in Mechanical and materials form Universiti Kebangsaan Malaysia in 1996, and PhD in Mechanical and materials form Universiti Kebangsaan Malaysia in 2001. He is a fellow member of Institute Malaysia of Material since 2005. He and his team have won several awards in the international technical expo in recognition of their research works on brake friction material and hard thin film coating.

**RESEARCH INTERESTS**

- i) Friction materials
- ii) Hard thin film coating
- iii) Plasma spray coating
- iv) Friction and wear
- v) Characterization and performance of brake friction material

**EDUCATION**

Diploma (Mechanical Engineering) – **1977**

B Eng Mechanical Engineering – **1984**

PhD (Mechanical and materials engineering) – **2001**

<b>EMPLOYMENT</b>
<p>Technical assistant (<b>July 1977 - June 1985</b>) Public Work Department</p> <p>Principal researcher (<b>July 1985 – Jan 2012</b>) Advanced Materials Research Center, Sirim Berhad.</p> <p>Associate Professor (<b>Nov 2013 – to date</b>) Universiti Teknologi MARA</p>
<b>ON-GOING RESEARCH PROJECTS</b>
<p>i) Fabrication of Carbon-Copper Composites Using Local Carbon Material through Warm Compaction Process.</p> <p>ii) Concurrent Brake Actuator with Nonlinear Force Distribution Control for Motorcycle Applications.</p> <p>iii) Development of Surface Texture Analysis and Characterization Application Package</p>
<b>PUBLICATIONS (selected recent papers)</b>
<p>i) <b>R.J. Talib</b>, A. Muchtar and C.H. Azhari. 2003. Microstructural characteristics on the surface and subsurface of semi-metallic automotive friction materials during braking process. <i>Journal of Material Processing Technology</i> 140, 694-699.</p> <p>ii) <b>R.J. Talib</b> and M.R.M. Toff. 2004. Plasma-Sprayed Coating of Hydroxylapatite on Metal Implants - A Review. <i>Med J Malaysia</i> Vol 59 Supplement B May 2004, 153-154.</p> <p>iii) <b>R.J. Talib</b>, M.R.M. Toff, H.M. Ariff. 2007. Wear Mechanism of TiN , TiAlN AND TiCN Coated Drills During Drilling of Medium Carbon Steel. <i>Physical Science</i>, Vol 18 (1), 75-85.</p> <p>iv) <b>Talib Ria Jaafar</b>, Mohmad SoibSelamat, Ramlan Kasiran, Selection of Best Formulation for Semi-metallic Brake Pads Development in Powder Metallurgy, <i>INTEC Croatia</i>, 2012, 1-30.</p> <p>v) <b>R.J. Talib</b>, A.M. Zaharah, M.A. Selamat, A. A. Mahaidin and M.F. Fazira, Friction and Wear characteristics of WC and TiCN-coated Insert in Turning Carbon Steel Workpiece, <i>Procedia Engineering</i> 68 (2013), 716-722.</p> <p>vi) A. Almaslow, M.J. Ghazali, <b>R.J. Talib</b>, CT Ratnam, CH Azhari. Effects of epoxidized natural rubber–alumina nanoparticles (ENRAN) composites in semi-metallic brake friction materials <i>Wear</i>, 2013.</p> <p>vii) A Almaslow, MJ Ghazali, <b>RJ Talib</b>, CT Ratnam, C.H Azhari. Effects of electron-beam and sulfur crosslinking of epoxidized natural rubber on the friction performance of semimetallic friction materials. <i>Composites Part B: Engineering</i> Volume 54, November 2013, 377–382.</p> <p>viii) Siow Ping Chuan, Jaharah A. Ghani, Mariyam Jameelah Ghazali, <b>Talib Ria Jaafar</b>, Mohamad Asri Selamat, Che Hassan Che Haron. Characterization of TiCN and TiCN/ZrN Coatings for Cutting Tool Application. <i>Ceramics International</i>, 39 (2013) 1293–1298.</p>

- ix) R.J. Talib, A.A. Mahaidin, S.A. Manaf, M.A. Selamat. Mechanical Properties and Microstructures of WC-Co Cutting Tool Inserts With Addition of VC, Advanced Materials Research Vol 879, Trans Tech Publication, 213-217.
- x) **R.J. Talib**, M.A. Selamat, Z. J. Rusila, M.F. Ismail, Friction and Wear Characteristics Cu-based P/M Brake Friction Materials with Addition of Fe and C, Applied Mechanics and Materials Vol. 661 (2014) pp 21-26.

## AWARDS

**Best Poster Presentation.** International Conference on Materials and Metallurgical Technology 2009 (ICOMMET09), 24<sup>th</sup> & 25<sup>th</sup> Jun 2009, Surabaya, Indonesia

**Best micrograph.** 3<sup>rd</sup> ASEAN Microscopy Conference and The 19<sup>th</sup> Annual Conference of the Electron Microscopy Society of Thailand, 30<sup>th</sup> Jan – 1<sup>st</sup> Feb 2002, Chiang Mai, Thailand

**Gold Award IID 2014 (Penang Inovation, Invention and Design 2014)** - Fabrication Of Carbon-Copper Composites Using Local Carbon Material for Electrical and electronic Application Mohd Afiq Nurul Hadi, Salina Budin, Mohd Asri Selamat, Talib Ria Jaafar, Ahmad Aswad Mahaidin.

**Silver Award Seoul International Invention Fair 2011** - Hard Thin Film Coatings on Cutting Tools. Seoul International Invention Fair (SIIF) , 1<sup>st</sup>- 4<sup>th</sup> December 2011, Seoul, Korea. Fazira Mohamed Fadzil, **Dr Talib Ria Jaafar**, Abdul Hakim Hashim, Mansor Abdul Hamid, Mohd Zakuan Abdullah, Norazlan Roslani dan Amin Morat

**Silver Award International Technology Expo 11** - High-Performance HSS and WC Tool Insert Developed through Powder Metallurgical Route. **Dr Talib Ria Jaafar**, Mohd Asri Selamat, Ahmad Aswad Mahaidin, Samsiah Abdul Manaf dari SIRIM AMREC.

**Silver Award International Technology Expo 08** - Non-Asbestos Brake Friction Materials For Heavy Duty Application. **Dr. Talib Ria Jaafar**, Dr. Mohd Asri Selamat, Dr. Mohmad Soib Selamat, Eliasidi Othman, Norazlan Roslani, Sutiman Kemin, Ramlan Kasiran, Prof. Ir. Dr. Mohamad Nor Berhan, Assoc. Prof. Dr. Mustafar Sudin.

**Granted Malaysian Patent MY-145523-A** - A Method for Producing Non-Asbestos Brake Friction materials, **Dr Talib Ria Jaafar**, Dr Mohd Asri Selamat, Dr Mohmad Soib Selamat, Ramlan Kasiran, Eliasidi Abu Othman, Prof. Ir. Dr Mohamad Nor Berhan, Prof. Madya Dr Mustafar Sudin, **10 Dec 2007, 29 Feb 2012**